



Searching for the Financial Accelerator: How Credit Affects the Business Cycle

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A prominent view in economics is that malfunctioning credit markets “are not simply passive reflections of a declining real economy, but are in themselves a major factor depressing economic activity.”¹ This view has greatly influenced monetary policy. A clear example is the recent “Great Recession,” when financial markets became volatile and illiquid and the viability of some of the world’s leading financial institutions was seriously in doubt. Federal Reserve policymakers responded aggressively by lowering interest rates to near zero, implementing lending facilities, and instituting multiple rounds of quantitative easing, parts of which were aimed directly at supporting the functioning of the financial system.

Analyses linking the performance of financial markets to aggregate economic activity typically have a financial accelerator mechanism at their core. Fed Chairman Ben Bernanke eloquently summarizes the workings of this mechanism in a recent speech.² Here, I interpret movements in business credit demand and liquid asset holdings in terms of this theory.

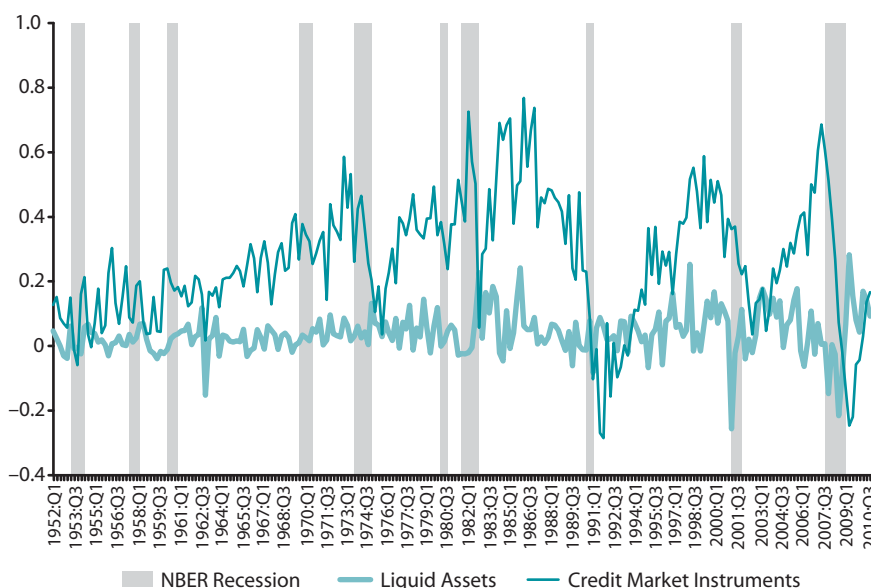
The key links between the workings of the financial system and real economic activity are easily understood. Entrepreneurs may develop profitable projects and firms may find it profitable to expand or invest more. Both actions typically require tapping credit markets to obtain required resources. Access to credit, however, is limited by the presence of asymmetric information and principal-agent problems, which are natural in credit relations. Financial institutions appropriately monitor borrowers to help overcome these frictions.

Because of the costs incurred by lenders to monitor borrowers, external financing is generally costlier than internal financing. This external finance premium is negatively related to the borrower’s net worth and overall financial position. This relationship creates a mechanism of financial acceleration. Any shock that affects the financial position of the firm affects its borrowing capacity, which in turn affects its profitability and, ultimately, its financial position. Shocks that otherwise would be short-lived may be easily amplified through this channel.

Two natural implications of the accelerator mechanism are that (i) crises with high financial distress should be

Net Changes in Credit Market Instruments and Liquid Assets (nonfinancial business sector)

Net Changes in Credit Market Instruments/Income Before Taxes



NOTE: NBER, National Bureau of Economic Research.

SOURCE: Federal Reserve Statistical Release Z.1: Flow of Funds Accounts of the United States (www.federalreserve.gov/releases/z1/).

Firms started repaying their debts during 2008-2009, and they did so while simultaneously accumulating highly liquid assets. These two observations are puzzling if one believes firms are purportedly starving for credit but cannot obtain it.

associated with relatively larger declines in credit and (ii) a decline in credit should be associated with a decline in holdings of liquid assets. The chart shows the ratio of net changes in credit market instruments (including bank loans, commercial paper, and corporate bonds) to income before taxes for the U.S. nonfinancial business sector. Credit declined quite substantially during the Great Recession, as the theory predicts, given the distressed financial markets. However, the net change in credit does not seem particularly different from the two previous recessions, which were milder and not obviously driven by financial distress. Of note, not only did credit decline from 2008 to 2009, but firms also started repaying their debts (the change is negative). Furthermore, they did so while simultaneously accumulating highly liquid assets (currency, savings, and checkable deposits). The combination of these two observations is puzzling if firms are purportedly starving for credit but cannot obtain it.

The implementation of aggressive policies supporting credit markets is one possible explanation why credit did not drop more than in previous crises. It is also possible that shocks affect small and large firms asymmetrically and that aggregate data, as used here, mask such effects. Finally, the recent crisis may have affected very short-term credit instruments that are not necessarily captured in the quarterly frequency data available from the Fed's Flow of Funds Accounts statistical release. ■

¹ Bernanke, Ben S.; Gertler, Mark and Gilchrist, Simon. "The Financial Accelerator in a Quantitative Business Cycle Framework," in John B. Taylor and Michael Woodford, eds., *Handbook of Macroeconomics*. Chap. 21. Amsterdam: Elsevier, pp. 1341-393.

² Bernanke, Ben S. "The Financial Accelerator and the Credit Channel." Presented at the Federal Reserve Bank of Atlanta Conference, Credit Channel of Monetary Policy in the Twenty-First Century, June 15, 2007; www.federalreserve.gov/newsevents/speech/Bernanke20070615a.htm.